ATTACHMENT D:
EMT-INTERMEDIATE / EMT-PARAMEDIC
APPROVED SKILLS / COURSE OUTLINE
STATE APPROVED DRUG LIST / DEVICE LIST

1. EMT-INTERMEDIATE

A. APPROVED SKILLS

The role of the EMT-I is one of authority when working with a EMT-B and one of support when working with a paramedic.

EMT-I=s are authorized to perform any of the basic life support skills. In addition, they may perform the following **intermediate life support skills** under the supervision of a medical control physician:

Esophageal obturator airway application
Esophageal gastric tube airway application
Laryngeal Mask Airway
Nasotracheal intubation
Endotracheal intubation
Combi-tube airway
Pharyngeal tracheal lumen airway
Intravenous therapy (peripheral, external jugular or intra osseous)
Sterile suctioning (endotracheal)
Chem strip analysis

To perform the EMT-Intermediate skills, EMT-I=s must also be members of a SC licensed EMS service that is licensed to provide intermediate extended or advanced life support.

B. INITIAL INTERMEDIATE COURSE OUTLINE

The EMT-I course is taught from the NHTSA's current intermediate curriculum. The initial course consists of **eighty hours** of instruction, of which sixty-four hours are theory (didactic / skills practice), and sixteen hours are clinical.

Didactic material is presented as follows:
(The italicized topics are EMT-B core curriculum material.)

Orientation 4 hours

Ambulance run report form
Laws of consent, abandonment, negligence
Do not resuscitate orders (DNR)
Roles and responsibilities
Medical terminology
Reporting and communications

Patient Assessment 12 hours

Anatomy and physiology of the heart
Anatomy and physiology of the respiratory system
Signs and symptoms, vital signs
New assessment skills
Didactic and skills practice

Advanced Airway Management 12 hours

Anatomy/physiology
Assessment
Respiratory mechanics
Basic airway management
Advanced airway management
EOA, EGTA, PTL, Combi-tube, Endotracheal tube, Nasotracheal tube, sterile suctioning
Basic/Advanced airway management
Practice skills and check off

Shock/Trauma 16 hours

Trauma to the chest (blunt and penetrating)
Trauma to the abdomen (blunt and penetrating)
Head injuries
Spinal column/cord injuries
Hemorrhage control/soft tissue injuries
Musculoskeletal system/fractures and dislocations
Pathophysiology of shock
Shock treatment
Fluids
Intravenous therapy
Intraosseous therapy
Pneumatic anti-shock garment
Practice skills and check off

Medical Emergencies 8 hours

CPR and obstructed airway

Hyperthermic conditions
Hypothermic conditions
Seizures
Burns
Drowning/diving emergencies
OB/GYN emergencies
Diabetic emergencies
Cerebrovascular accident
Anaphylaxis
Dialysis emergencies
Cardio-respiratory
Environmental
Behavioral
OB/GYN/Pediatrics/Neonatal

Transition Skills	8 hours
AED	
Patient assisted medications	
Auto-injectors	
Basic skills review	
Basic Skills Review Session	4 hours
Didactic Total	64 hours
Clinical	16 hours
Total	80 hours

C: REFRESHER INTERMEDIATE COURSE OUTLINE

The **EMT-I refresher course** is forty-eight hours in length. It is taught by the EMS regional councils. The course curriculum incorporates both basic and intermediate skills, and is structured as follows (the EMT-B core curriculum material is noted in italics):

Orientation 4 hours

Ambulance run report form
Laws of consent, abandonment, negligence
Do not resuscitate orders (DNR)
Roles and responsibilities
Medical terminology
Reporting and communications

Patient Assessment 8 hours

Anatomy and physiology of the heart
Anatomy and physiology of the respiratory system
Signs and symptoms, vital signs
New assessment skills
Didactic and skills practice

Advanced Airway Management 8 hours

Anatomy/physiology
Assessment
Respiratory mechanics
Basic airway management
Advanced airway management
EOA, EGTA, PTL, Combi-tube, Endotracheal tube, Nasotracheal tube, Sterile suctioning
Basic/advanced airway management
Practice skills and check off

Shock/Trauma 8 hours

Trauma to the chest (blunt and penetrating)
Trauma to the abdomen (blunt and penetrating)
Head injuries
Spinal column/cord injuries
Hemorrhage control/soft tissue injuries
Musculoskeletal system/fractures and dislocations
Pathophysiology of shock
Shock treatment
Fluids
Intravenous therapy
Intraosseous therapy
Pneumatic anti-shock garment
Practice skills and check off

Medical Emergencies 8 hours

CPR and obstructed airway
Hyperthermic conditions
Hypothermic conditions
Seizures
Burns
Drowning/diving emergencies
OB/GYN emergencies
Diabetic emergencies
Cerebrovascular accident

Anaphylaxis
Dialysis emergencies
Cardio-respiratory
Environmental
Behavioral
OB/GYN/Pediatrics/Neonatal

Transition Skills	8 hours

AED
Patient assisted medications
Auto-injectors
Basic skills review

Basic Skills Review Session	4 hours
Total	48 hours

D. STATE CERTIFICATION - INTERMEDIATE

In order **to obtain state certification, the EMT-I** student must:

a. Attend the required number of classes to ensure that all **attendance** requirements are met.

b. Complete all in-course examinations with an average grade of **70** percent or higher.

c. Successfully complete the National Registry written examination.

d. Successfully complete the National Registry practical skills examination.

e. Must have current BLS card by the end of the course.

f. Must submit a properly completed *Certificate Application* card with all required endorsements

2. EMT-PARAMEDIC

A. APPROVED SKILLS

The EMT-P serves a unique role in the emergency medical services system, functioning as the eyes, ears, and hands of the medical control physician. At the direction of the physician, the EMT-P can perform advanced life support procedures that prior to the mid 1970's were performed only in the emergency department.

EMT-Ps are authorized to perform any of the basic and intermediate life support skills (see page 1). In addition, they may perform the following advanced life support skills under the supervision of a medical control physician.

Medication administration techniques:
- Sub Q injection
- IM injection
- IV push
- IV drip
- IV from prefilled syringe
- Rectal

Emergency drug therapy per state protocol
Approved interfacility drug transport
Pleural decompression (adult and pediatric)
Gastric lavage
Defibrillation
Synchronized cardioversion
External pacing
Manage cardiac arrest and cardiac patient per ACLS standards
EKG monitoring and rhythm identification (12-lead EKG - local option)
Vagal maneuvers
Rapid Sequence Intubation

EMT-Ps must be practicing members of a SC licensed EMS service that is licensed to provide advanced life support.

B. COURSE PRE-REQUISITE /OUTLINE / CLASS STRUCTURE

The **paramedic course** is taught from the NHTSA=s current paramedic curriculum. All candidates must successfully complete a state-approved Anatomy & Physiology course in order to continue in the program

Anatomy & Physiology

The Anatomy & Physiology Course is a Apre-requisite@ to the Paramedic course and will be a minimum of 45 hours in length with no required lab. All of the objectives in the National Standard Curriculum will be met. The training institution is encouraged to contract with an institution of higher learning to provide this course. Any A&P course taught by these institutions that meets or exceeds the above objectives is acceptable.

A) Instructor Requirements

If the EMS training agency teaches the A&P course without contracting with an institution of higher learning, the instructor must possess a minimum of:

- Bachelor of Science
- Relevant teaching experience (as defined by the agency)

B) Testing

If the EMS training agency teaches the A&P course without contracting with an institution of higher learning, the students must successfully pass a final comprehensive examination that ensures the student has mastered the required objectives. The test will be created and administered by the training agency.

C) Textbooks

The individual training agency is responsible for the choice of textbooks for the A&P course. The textbook must include all objectives of the National Standard Curriculum.

D) Exempting the A&P Course

Any candidate that has a passing score in an A&P course ,which meets or exceeds the objectives of the National Standard Curriculum, taught at a Technical School, College or University, may exempt this pre-requisite.

If the candidate=s A&P course completion is more than three (3) years prior to the start date of the Paramedic course, that candidate must pass the comprehensive final A&P examination as administered by the training agency in order to exempt the A&P portion of the course. Only one (1) testing attempt shall be allowed.

Minimum Course Hours

The course consists of a minimum of 1000 hours divided as follows:

Classroom instruction: **349 didactic** hours and **147 practical** hours
Field Competency, Internship / Evaluation: **260** hours
Clinical Rotations: **244** hours

- Class content (**minimum hours**) consist of nine modules as listed below.

Module	**Didactic**	**Practical**	**Total**
Anatomy & Physiology ***(Pre-requisite)*** Satisfactory Completion is required to continue in course.	**45**	**0**	**45**
Preparatory	45	10	55
Airway / Ventilation	12	10	22
Patient Assessment	18	15	33
The above modules must be successfully completed in order to continue in the course.			
Trauma	32	22	54
Medical *(Includes RSI & 12 Lead ECG)*	110	34	144
Special Considerations	38	16	54
Assessment Based Management	4	4	8
Operations	16	24	40
Miscellaneous / Review	**29**	**12**	41
TOTAL MINIMUM HOURS	**349**	**147**	**496**

- Modular Format

The class will be taught in modules as listed above. The Course Instructor will decide how much time of the total hours in each module is spent covering the objectives within that module. **The first three (3) modules after the pre-requisite A&P course, must be successfully completed before the student can attend any of the other modules.**

Successful completion of a module will be good for three (3) years from the completion date of that module.

- Field Competency, Internship / Evaluation *(Minimum of 260 Hours)*

Field requirements are to be **Acompetency-based.@** Regardless of the Aminimum@

hours assigned, each student must have documentation of the following competencies to fulfil the field requirements:

Psychomotor Skills

< The student must demonstrate the ability to safely administer medications to fifteen (15) patients.

< The student must demonstrate the ability to safely perform endotracheal intubation on five (5) patients

< The student must demonstrate the ability to gain venous access on twenty-five (25) patients of various age groups

< The student must demonstrate the ability to effectively ventilate five (5) unintubated patients of various age groups

Comprehensive Patient Assessments

Ages

< The student must demonstrate the ability to perform a comprehensive assessment on thirty (30) pediatric patients (including newborn, infants, toddlers and school age)

< The student must demonstrate the ability to perform a comprehensive assessment on fifty (50) adult patients

< The student must demonstrate the ability to perform a comprehensive assessment on twenty (20) geriatric patients sixty-five (65) years of age or older.

Pathologies

< The student must demonstrate the ability to perform a comprehensive assessment of ten (10) obstetric patients

< The student must demonstrate the ability to perform a comprehensive assessment on ten (10) psychiatric patients.

Complaints

< The student must demonstrate the ability to perform a comprehensive assessment,

formulate, and implement a treatment plan on thirty (30) patients with chest pain.

< The student must demonstrate the ability to perform a comprehensive assessment, formulate, and implement a treatment plan on twenty (20) adult patients with dyspnea / respiratory distress.

< The student must demonstrate the ability to perform a comprehensive assessment, formulate, and implement a treatment plan on eight (8) pediatric patients with dyspnea / respiratory distress.

< The student must demonstrate the ability to perform a comprehensive assessment, formulate, and implement a treatment plan on ten (10) patients with syncope related symptoms.

< The student must demonstrate the ability to perform a comprehensive assessment, formulate, and implement a treatment plan on twenty (20) patients with abdominal complaints (abdominal pain, nausea/vomiting, GI bleeding, gynecological complaints, etc.).

< The student must demonstrate the ability to perform a comprehensive assessment, formulate, and implement a treatment plan on twenty (20) patients with altered mental status.

Team Leader Skills

< The student must demonstrate the ability to serve as an active participant on fifty (50) pre-hospital emergencies, ten (10) of which the student must perform as the team leader.

 Clinical Hours *(Minimum of 244 Hours)*

Each student must successfully complete the required minimum clinical hours as listed below:

Clinical Rotations	**Minimum Hours**

Clinical Rotations	**Minimum Hours**
Anesthesia & OR	20
Critical Care *(To include Coronary Care Unit)*	24
Emergency Department	92
Trauma Center (Level I or II)	24
Triage	8
IV Team	0
Autopsy	4
OR	*(Combined with Anesthesia)*
Pediatric *(To include NICU, Pediatric ED)*	32
Psychiatric	8
Labor & Delivery -or- OB / Gyn.	8
Elective / Miscellaneous	0
Home Health	16
Dialysis Center	8
Clinical Total	**244**

NOTE: Although there are minimum hours assigned to field & clinical requirements, the hourly requirements will be re-visited periodically and adjusted where necessary to ensure that the competency and integrity of the program meets or exceeds national standards.

Associate Degree Program

There is one technical college, Greenville Technical College, that operates an associate degree program through which EMTs at all levels are trained. Their curriculum meets all NHTSA EMT training objectives, and students must meet the institution's admission, progression, absentee and graduation criteria as is approved by DHEC in order to test for state certification.

C: REFRESHER PARAMEDIC COURSE OUTLINE

The **paramedic refresher course** is taught from the current NHTSA paramedic curriculum. It is taught by the state-approved EMS training centers. The course consists of forty-eight hours of instruction, plus four to ten hours of testing. The course consists of the following five sections:

Assessing, Reporting, and Operations	3 hours
Cardiology	15 hours
Traumatology	15 hours
Pediatrics and Obstetrics	5 hours
Medical/Psychological	10 hours
Total	48 hours

D: STATE CERTIFICATION

In order **to obtain state certification**, the EMT-P candidate must:

a. Attend the required number of classes to meet **attendance** requirements. All students must discuss any absence with the course instructor and must make arrangements to make up the class before the absence can be excused. Any student who misses more than the allowable number of absentee hours of the course will not be allowed to make it up or complete the course. All students must sign a statement of understanding regarding attendance.

b. Must provide statements from a SC licensed provider and service medical control physician indicating sponsorship (i.e. a properly completed *Certificate Application* card).

c. Make an overall average score of **70** percent to pass the course. The instructor quizzes, averaged, will count as 25 percent of the student's grade. The eight (8) modular in-course examinations, when averaged, will count as 75 percent of the student's course grade. If the student scores less than 70 percent, he or she fails the course and will not be permitted to take the Registry exam which serves as the state initial examination.

d. Candidates who successfully complete a state-approved EMT-P initial course must successfully pass the National Registry EMT Paramedic written and practical exam to become certified as a paramedic. The student must successfully pass the written & practical examinations according to National Registry standards.

3. THE STATE APPROVED DRUG LISTS AND DEVICE LISTS

THE STATE-APPROVED PREHOSPITAL DRUG LIST:

The State-approved prehospital drug list includes drugs which are approved for use by EMT=s in the field. It is updated annually, usually at a March meeting of the Medical Control Committee.

Any medical control physician who wishes to add, delete, or change a drug on the list may submit a request in writing on the form provided in the appendices of this book. The form should be typed neatly and include all necessary information for the Committee to base a decision. The form is then submitted to the physician=s regional medical control physician who is represented on the Committee. (See Prehospital Drug List Appendix.)

Only the approved indications, dosages and routes of administration in these documents can be used in the field and in EMT-P training programs. Any other use of these drugs is not the approved standard and will be considered non-compliant.

The document is designed to educate the EMT-P and the medical control physician (on-line and off-line) on the drugs that EMT-Ps are trained to utilize in the field. It is not meant to interfere in the practice of medicine. If the medical control physician would like to use different methods the physician should submit a pilot project for test and evaluation.

There are specific drugs contained in the document that require on-line medical control. These drugs are denoted by the statement: AOnly with on-line medical control order.@ There can be no standing orders for Diazepam (CIV), Ativan and morphine (CII) as these are controlled drugs.

On-line directions to EMT-Ps should be rendered by the physician-either in person, by telephone or over the radio. If a physician is unable to speak directly to the EMT-P, medical control should not be abandoned. It is then permissible for a physician=s designee (an RN) to relay his/her (the physician=s) direct orders by telephone or radio. **It is NEVER acceptable for orders to originate from a nurse, physician=s assistant, or anyone other than the on-line medical control physician.**

It is the responsibility of the local medical control physician to ensure that the appropriate state and federal registrations are in place for each EMS service that he/she oversees. The local medical control physician must have separate and individual state and federal controlled substance registrations for each and every service that he/she oversees and authorizes to utilize controlled substances (i.e. Diazepam, Ativan or Morphine). See Section II, Page 46 for further information.

SPECIAL PURPOSE (LOCAL OPTION) DRUG LIST:

Because the list of State-Approved Drugs had begun to grow to a nearly unmanageable size, the EMS Advisory Council recently split the list into two separate lists: one includes drugs used commonly by all EMS Services, the State-Approved Drug List; and a second list, the Special Purpose or Local Option Drug List, which includes drugs which the local medical control physician may choose to enable his EMT-Ps to use. The Special Purpose Drug List includes drugs which may be needed in one part of the state (i.e. for certain types of industrial accidents)

or which may be preferred for use by individual medical control physicians in their local protocols.

Each local medical control physician should choose from the approved list which ASpecial Purpose@ drugs he/she wishes to enable his/her EMT-Ps to use. The local medical control physician then becomes responsible for the training of the EMT-Ps using these drugs and for quality improvement specifically related to these drugs. Drugs are added, deleted or changed in dosage annually at the Medical Control Committee meeting in which all other drugs are considered, usually in March.

The list of ASpecial Purpose@ drugs includes (see Drug List Appendix, they have not been separated out):

Aspirin (Children=s chewable)
Diltiazem Hydrochloride/*Cardiazem*
Dobutamine Hydrochloride/*Dobutrex*
Flumazenil/*Romazicon*
Heparin Lock Flush
Ibuprofen/ *Motrin, Advil, Pedi-Profen*
Labetolal/ *Normodyne, Trandate*
Nalbuphine Hydrochloride/*Nubain*
Oxytocin/*Pitocin*
Nitrous Oxide (50%) & Oxygen (50%) *Nitronox*
Proparacaine Hydrochloride/ *Ocu-Caine (Alcaine)*
Promethazine/*Phenergan*

INTERFACILITY DRUGS:

Until recently, an approved interfacility drug list allowed the transport of patients with only the drugs included on that list. The EMS Advisory Council, acting on a recommendation of the Medical Control Committee, approved the deletion of the interfacility list in favor of a standard form which, when completed and signed, will allow patients to be transported on any drug started by the sending hospital. (See Interfacility Drug Transport Appendix.) The interfacility transport drugs must be initiated at the sending facility and the patient must be stabilized on the medication prior to transport. ***As before, only EMT-Paramedics may transport interfacility patients who are receiving drugs.***

Interfacility drugs must be supplied and initiated by the sending facility. The interfacility drug transport form must accompany the patient when the patient is to be administered an interfacility transport drug en route between facilities. It is necessary that all the information requested on the form be completed if the EMT-P is to accept the patient and act within the required protocols for appropriate interfacility transport and treatment.

The EMT-P who is transporting the interfacility patient IS NOT allowed to adjust the drugs (except to decrease/discontinue the medication), even with on-line medical control. EMT-Ps are not authorized to mix interhospital transport drugs. If it is anticipated that intravenous fluids will run out during transport, an additional bag of fluid should be supplied - pre-mixed- and piggy backed into the existing IV infusion before or during transport.

THE IMPLANTED/INVASIVE DEVICE LIST:

The Device List manual (see Device List Appendix) was developed in response to concerns about many of the devices which are being used on patients during interfacility transports. This list is treated in a manner similar to the state-approved prehospital drug list. Any invasive or implanted device not described in the manual should NOT be transported by EMS personnel without an accompanying nurse or physician capable of monitoring and caring for the device. This list is similar to the state drug list in that other devices will be considered annually for addition to the list.

EMS services and their medical control physicians may choose not to transport patients interhospital with any of the included devices. However, given the likelihood that an EMT may be called upon to transport a patient with one of these devices in an emergency situation, all services using any of these devices MUST provide inservice training on these devices to their personnel.

Note that transport ventilators are not currently included on this list. There are several areas of concern related to the standardization and efficacy of ventilators. Until such time that studies are completed in this area, no changes in local procedures are suggested.